

IN THE CLAIMS

Please amend the claims as follows.

1. (currently amended) A portable x-ray device, comprising:
a housing with a first portion that contains an x-ray source that is powered by an integrated power system that provides a continuous, high voltage DC power and the housing also contains an internal power source; and
wherein the x-ray device has a high current load sufficient for radiographic imaging.
2. (previously presented) The device of claim 1, wherein the integrated power system comprises a plurality of low voltage power supplies.
3. (original) The device of claim 1, wherein each power supply provides a power ranging from about 20 to about 50 kV.
4. (currently amended) The device of claim 1, wherein the portable device is handheld
~~power system provides a continuous high voltage DC power.~~
5. (previously presented) The device of claim 1, further comprising a display for a radiographic image that is integrated into the housing.
6. (original) The device of claim 1, wherein the x-ray source is shielded with a low-density insulating material.
7. (original) The device of claim 6, wherein the low-density insulating material comprises silicone or epoxy.
8. (original) The device in claim 6, wherein the shielding further comprises a high-Z substance.

9. (currently amended) The device in claim 8, wherein the high-Z substance comprises W, Ta, Bi, Ba, or combinations thereof.

10. (currently amended) A handheld x-ray device, comprising:

a housing with a first portion that contains an x-ray source shielded with a low-density insulating material and that is powered by an integrated power system that provides a continuous, high voltage DC power; and

the housing also has a second portion that contains an internal power source, the second portion being removably attached to the first portion so that when the second portion is removed from the first portion, no power is generated for the x-ray source;
wherein the x-ray device has a high current load for radiographic imaging.

11. (original) The device of claim 10, wherein the power system comprises a plurality of low voltage power supplies with each power supply providing a power ranging from about 20 to about 50 kV.

12. (original) The device of claim 10, wherein the low-density insulating material comprises silicone or epoxy.

13. (previously presented) The device in claim 12, wherein the shielding further comprises a high-Z substance comprising W, Ta, Bi, Ba, or combinations thereof.

14. (currently amended) A system for x-ray analysis, the system containing a portable x-ray device with a housing containing an x-ray source that is powered by an integrated power system that provides a continuous, high voltage DC power and which includes a plurality of power supplies with each power supply providing a power ranging from about 20kV to about 50kV and the integrated power system provides a high current load sufficient for radiographic imaging, wherein the housing also contains an internal power source.

15. (previously presented) The system of claim 14, wherein x-ray ray source is contained in a first portion of the housing and the internal power source is contained in a second portion that is removably attached to the first portion so that when the second portion is removed from the first portion, no power is generated for the x-ray source.

16. (original) The system of claim 14, wherein x-ray source is shielded with a low-density insulating material containing a high-Z substance.

17. (currently amended) A method for making a portable x-ray device with a high current load, the method comprising:

- providing an x-ray source in a first portion of a housing;
- providing an integrated power system that provides a continuous, high voltage DC power in the first portion of the housing and connecting it to the x-ray source;
- providing an internal power source in a removable, second portion of the housing; and
- connecting the second portion to the first portion.

18. (original) The method of claim 17, including:

- providing the power system with a plurality of low voltage power supplies with each power supply providing a power ranging from about 20 to about 50 kV; and
- providing the x-ray source with a shielding comprising a low-density insulating material containing a high-Z substance.

19. (currently amended) A method for analysis, comprising:

- providing a material to be analyzed;
- providing a ~~portable~~ handheld x-ray device with a high current load, the device having a housing that contains an x-ray source that is powered by an integrated power system that provides a continuous, high voltage DC power and the housing also contains an internal power source; and
- actuating the x-ray source so that an x-ray impinges on the material.

20. (original) The method of claim 19, including:

providing the power system with a plurality of low voltage power supplies with each power supply providing a power ranging from about 20 to about 50 kV; and

providing the x-ray source with a shielding comprising a low-density insulating material containing a high-Z substance.

21. (currently amended) A method for dental imaging, comprising:

providing a tooth of a patient to be analyzed;

providing a portable x-ray device with a high current load for radiographic imaging, the device having a housing that contains an x-ray source that is powered by an integrated power system that provides a continuous, high voltage DC power and the housing also contains an internal power source; and

actuating the x-ray source so that x-rays impinge on that tooth.

22. (original) The method of claim 21, including:

providing the power system with a plurality of low voltage power supplies with each power supply providing a power ranging from about 20 to about 50 kV; and

providing the x-ray source with a shielding comprising a low-density insulating material containing a high-Z substance.

23. (currently amended) A portable handheld x-ray device, comprising:

a housing having a first portion that contains an x-ray source that is powered by an integrated power system that provides a continuous, high voltage DC power and which includes a plurality of power supplies with each power supply providing a power ranging from about 20kV to about 50kV and the power system provides a current sufficient for radiographic imaging;

the housing also having a second portion that contains an internal power source and the second portion is removably attached to the first portion so that when the second portion is removed from the first portion, no power is generated for the x-ray source; and

a display integrated into the first portion of the housing to display a radiographic image.

24. (previously presented) The device of claim 23, wherein the x-ray source contains a shielding comprising a low-density insulating material containing a high-Z substance.